

PATENT
Serial No: 10/614,859
Docket No: 29284-598

IN THE CLAIMS:

1. (Currently Amended) A storage system comprising:

a channel unit that transfers data sent from an upper-level system and transfers data to said upper-level system;

a cache unit which is coupled to said channel unit and in which data sent from said channel unit is stored;

a plurality of control units that is coupled to said cache unit, and transfers or receives data to or from said cache unit;

a disk device that stores data written under control of each of said plurality of control units;

a plurality of paths, a first one of said paths coupling said cache unit to a first one of said control units, a second one of said paths coupling said cache unit to a second one of said control units, a third one of said paths coupling said cache unit to said channel unit;

at least one first processor for controlling transfer to and from the cache unit of data which is transferred from said upper-level system and received at and transferred from said channel unit; and

at least one second processor for controlling said cache unit to transfer data to said disk device, wherein

~~a number of said paths linking said plurality of control units and said cache unit are at least equal to a number of said plurality of control units~~ said third one of said paths not intersecting with said first one of said paths or said second one of said paths, except for at an end point connecting said third one of said paths to said cache unit.

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2. (Canceled)

3. (Previously Presented) A storage system according to claim 1, wherein said first one of said paths and said second one of said paths are independent of each other.

PATENT
Serial No: 10/614,859
Docket No: 29284-598

4. (Previously Presented) A storage system according to claim 1, wherein said first one of said paths is dedicated to communication between said first control unit and said cache unit.

5. (Previously Presented) A storage system according to claim 4, wherein said second one of said paths is dedicated to communication between said second control unit and said cache unit.

6. (Original) A storage system according to claim 1, wherein among said plurality of paths, a path linking said cache unit and a predetermined control unit included in said plurality of control units is not the same as a path linking said cache unit and an other control unit included in said plurality of control units.

7. (Previously Presented) A storage system according to claim 1, wherein said first one of said paths directly links said first control unit to said cache unit.

8. (Previously Presented) A storage system according to claim 7, wherein said second one of said paths directly links said second control unit to said cache unit.

9. (Previously Presented) A storage system according to claim 1, wherein said first one of said paths links said first control unit and said cache unit on a point-to-point basis.

10. (Previously Presented) A storage system according to claim 9, wherein said second one of said paths links said second control unit to said cache unit on a point-to-point basis.

PATENT**Serial No: 10/614,859****Docket No: 29284-598**

11. (Previously Presented) A storage system according to claim 1, wherein said disk drive includes a plurality of disk drives, and said plurality of control units is connected to said plurality of disk drives.

12. (Original) A storage system according to claim 1, wherein said plurality of paths are signal lines linking said cache unit and said plurality of control units.

13. (Previously Presented) A storage system according to claim 1, wherein said plurality of paths are used to write data, of which writing is requested by said upper-level system, from said cache unit to said disk device, and used to communicate data, of which writing is requested by said upper-level system, from said cache unit to said plurality of control units.

14. (Previously Presented) A storage system according to claim 1, wherein said plurality of paths are used to read data, of which reading is requested by said upper-level system, from said disk drive, and are used to communicate data, of which reading is requested by said upper-level system, from said control unit to said cache unit.

15. (Previously Presented) A storage system according to claim 1, wherein data received at the channel unit from said upper-level system is transferred to said cache unit under control of said first at least one processor.

16. (Previously Presented) A storage system according to claim 1, wherein said at least one second processor controls transfer of data to said control units from said disk drive.

17. (Previously Presented) A storage system according to claim 16, wherein data received at one of said control units is transferred to said cache unit under control of said at least one second processor.